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ABSTRACT

The data for this paper are drawn from a study of faculty perceptions about courses that are taught in locations away from a college campus, often called outreach, such as military installations, community centers, or business locations. Computer use in such settings presents difficulties in providing logistical support. Faculty were asked about computer availability and whether this affected student learning. Computer use in outreach courses, about 28%, is lower than a conservative predicted rate of 33%. The availability of computers apparently does not affect the faculty perception of student learning. The trend of the data does indicate a substantial increase in the use of computers in outreach courses. (3 references) (Author/DB)

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COMPUTER USE IN OUTREACH COURSES

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ABSTRACT

The data for this paper is drawn from a study of faculty perceptions about courses that are taught in locations away from a college campus, often called outreach, such as military installations, community centers or business locations. Computer use in such settings presents difficult logistical support. Faculty were asked about computer availability and whether this affected student learning. Computer use in outreach courses, about 28%, is lower than a conservative predicted rate of 33%. The availability of computers apparently does not affect the faculty perception of student learning. The trend of the data does indicate a substantial increase in the use of computers in outreach courses.

INTRODUCTION

A large number of colleges are teaching courses away from campus. These courses are commonly called outreach. Outreach has most often been evaluated by market forces (enrollment or revenue). An ongoing research project is attempting to assess the faculty perceived academic quality of such coursework (Cook & Cook, 1987). The content of credit courses offered off-campus ought to be similar to on-campus courses. The primary difference is the physical arrangements and the supports available to the faculty and students. Courses taught off-campus and/or on military bases tend to be oriented toward professional programs such as business, nursing, or engineering. It would be expected that many of these courses would require the student to use a computer. Computer availability and use was included as a course quality assessment factor. Three hundred twenty five faculty teaching in outreach programs have responded and information in regard to computer use in association with the course(s) they have taught is included in this paper. Identifying such faculty is very difficult since most of the programs are not listed in catalogs or other summary literature and a majority of faculty are either part-time, visiting, or on an extra-service type assignment for such programs.

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ASSESSMENT STANDARD

A preconceived quality measure for computer use was established as one-third of the courses would have some computer use. This is an extremely conservative estimate. One point of reference is the UCLA Survey of Business School Computer Use (Frand & Britt, 1989). The reported average computer use in business core courses in 1985 (comparable to some of the earlier data in this study) was 59.5% for undergraduate courses and 56.6% for graduate courses. This would be almost double the one-third figure used. The business school data is appropriate because a significant number of business courses are included in the responses. The exact percentage is unknown but based on judgement and the nature of the programs surveyed the estimate is that approximately one-half the responses are from business course faculty.

RESULTS

The survey results are that 72% of the faculty report that no computer facilities were necessary for their course. The information has been collected over a three year period. The stream of responses was examined to determine any trend. The older and larger portion of the data dominates the results. The most recent chunk from Fall 1989, 17% of the total, indicates non-computer use by 64% of the faculty responding. This indicates a trend for an increase in computer use in outreach. The UCLA business data indicates that in 1989 the curriculum penetration in business core courses was 72% for undergraduate and 66.5% for graduate courses. This suggests that computer use in off-campus courses is much less than in on-campus classes although the gap may be lessening. In other responses, 16% report that facilities were available and used in a normal fashion and 8% reported that a course had to be modified because of the computer availability. Only 4% reported dissatisfaction with computer availability. An assumption might be that faculty embarking on an outreach course may have low expectations of equipment availability. Table 1 summarizes these results. For those faculty wanting to use computers for their class, 56% reported satisfaction with the arrangements.

Table 1 - Computer Availability

	Total Response	Fall 89 Response
Computers not needed for class	72%	64%
Computers used as normal	16%	21%
Course modified-computers used	8%	10%
Computer access not adequate	4%	5%

The availability of a library with appropriate materials is a traditional measure of the quality of a college level course. Less than one-half the faculty report that such a library was available and convenient.

Table 2 - Library Availability

No appropriate library	15%
Library available & convenient	47%
Library available, difficult to use	38%

Some of the questionnaires included an item about whether course support services such as computer availability, library, etc. enhanced or inhibited student learning. The specific effect of computer access or quality of computer services cannot be separated from the other factors but Table 3 reflects a general satisfaction from an overall standpoint regarding course supports.

Table 3 - Course Supports and the Affect On Learning

Enhanced learning	44%
No affect on learning	47%
Inhibited learning	9%

The test of whether low computer expectation inhibited learning is enfolded in the overall assessment result of the faculty perceptions of student learning. Ninety-one percent of the respondents reported that their students learned as much or more than students in a comparable on-campus course. Only 9% reported that students in an outreach course learned less than an on-campus student. Some element of ego involvement may influence these observations since faculty are reporting on their own success in teaching the students. Table 4 reveals that the Fall 89 responses were less supportive with the "learned less" percentage doubling. Such a trend will continue to be assessed. Computer availability was only one aspect of this opinion about learning. The largest number (over half) of responses for "learned less" in the Fall 89 responses were from faculty reporting that computers were not needed in their class.

Table 4 - Faculty Assessment of Learning

	Total	Fall 89
Learned more	31%	18%
Learned the same	60%	64%
Learned less	9%	18%

The faculty opinions about the availability of a library and the opinions on learning were compared.

Table 5 - Library Access Versus Learning

	No Library	Library OK	Difficult to Use
Learn more	17%	34%	28%
Learn the same	58%	60%	56%
Learn less	15%	6%	16%
	N=45	N=137	N=112

It appears that faculty perceive a lower level of learning when they believe that there is no library or a difficult to use library supporting the course.

The availability of computers for courses was compared to the faculty perceptions of learning. It appears that faculty perceive that students learn less when computer access is not adequate but also when computers are used in a normal manner. The best results appear to be when the course is modified because of computer access.

Table 6.1
Computer Availability Compared With Learning

	Learn More	Learn Same	Learn Less
Computers not needed for class	72%	69%	66%
Computers used as normal	19%	14%	14%
Course modified-computers used	2%	13%	6%
Computer access not adequate	7%	4%	14%
	N=89	N=172	N=35

Table 6.2
Computer Availability Compared With Learning

	Learn More	Learn Same	Learn Less
Computers not needed for class	D E L E T E D		
Computers used as normal	68%	44%	42%
Course modified-computers used	8%	41%	16%
Computer access not adequate	24%	15%	42%
	N=25	N=54	N=12

OBSERVATIONS

Good results about learning in outreach classes may derive because of the type of student. A number of open ended comments describe students in these classes as mature and committed. No measures such as student GPA or normed test scores were used in this study. New projects have been designed with off-campus computer use a central focus of the project (IBM, 1989). Such projects are not included.

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